REMARKS

Applicant thanks the Examiner for this office action.

Claims 1-11 stand rejected under 35 USC 101 as claiming non-statutory subject matter, specifically as claiming an abstract idea. Claims 1-19 are further rejected under 35 USC 102 as being anticipated by US Pat. No. 6,496,974 to Slinger et al (hereafter Slinger).

CLAIM REJECTIONS - 35 USC 101

Claims 1-11 stand rejected under 35 USC 101 as claiming a non-statutory abstract idea. The office action states: "Examiner interprets that claims 1-11 are non-statutory because claim recites computer program, per se i.e. the description or expressions of the program are not physical thing nor are they statutory process as they do not act being performed. Computer programs do not define any structural and functional interrelationship between computer program and other claimed aspect of invention, which permits the computer program's functionality, could be realized." Applicants respectfully suggest that this analysis is not clear. As best understood, this analysis suggests that claims 1-11 are for a computer program; that computer programs are unpatentable per se because they do not produce a physical transformation; and that this analysis is consistent with the holding of *In re Warmerdam*.

In the case *In re Warmerdam*, the Federal Circuit citing Schrader stated that the dispositive issue for assessing compliance with Section 101 in a process claim is whether the claim is for a process that goes beyond simply manipulating "abstract ideas" or "natural phenomena". The Court reasoned that Warmerdam's claim 1 (which was a process claim) was not patentable under Section 101 because the body of claim 1 recited only two steps: "locating" a medial axis, and "creating" a bubble hierarchy," and that both steps describe nothing more than the manipulation of basic mathematical constructs, the paradigmatic "abstract idea." It should be noted that in the case *In re Warmerdam*, the Court states that "if a claim requires more than the manipulation of ideas so that the process described in the claim produces something quite different, then the process might indeed describe statutory subject mater."

Applicant would like to respectfully point out that claims 1-8 were previously canceled in this application, and their rejection is accordingly moot. Applicants would also like to respectfully pointy out that claims 9-11 are directed to an apparatus comprising logic. Applicant respectfully contends that the Office Action analysis is not appropriate for such apparatus. An apparatus comprising logic is tangible, concrete, and useful and can not by definition be limited to manipulation of abstract ideas. Moreover, as clearly indicated in the specification, this logic may be a processor such as a microprocessor, and may include internal memory {see para. 018}. As such, claims 9-11 are directed to an apparatus comprising logic performing stated functions on a software component and produce something completely different -- a tangible and useful metric

for software complexity which is useful in among other purposes: resource allocation, planning, scheduling, and cost estimation. As will be readily understood by those of ordinary skill in the art, this metric can be provided in various useful tangible forms, including: a digital memory with the metric encoded thereon, a display or paper media with the metric visible thereon, a digital media with the metric encoded thereon.

With regard to the analysis of the Office Action, Applicant respectfully disagrees with the suggestion that a claim for a machine executable process is non-statutory. In *Schrader* the Federal Circuit determined that section 101 required a process claim to have a transformation or reduction of subject matter and that data or signals may constitute subject matter. In *Warmerdam* the Federal Circuit acknowledged that "if a claim requires more than the manipulation of ideas so that the process described in the claim produces something quite different, then the process might indeed describe statutory subject matter. Accordingly, Applicant respectfully contends that the test for statutory subject matter is whether there is a transformation or reduction of subject matter (i.e., whether something different is produced. The apparatus of claims 9-11 provide transformations and produce a metric which is a useful measure of the complexity of a software component and is quite different than the software component.

CLAIM REJECTIONS - 35 USC 102

Claims 1-19 stand rejected under 35 USC 102 as being anticipated by US Pat. No. 6,496,974 to Slinger et al (hereafter Slinger).

Claims 1-8 were previously canceled in this application rendering their rejection moot for purposes of this application. Applicant respectfully contends that claim 9 is allowable because in includes a feature that is neither disclosed nor suggested by Slinger or any other reference cited, namely "logic for determining a plurality of versions of the software component." Slinger is directed to updating computer software using patch files, generation of patch files, and normalization of files to which such patches are applied. Slinger does not disclose or suggest determining a plurality of versions of a software component. The office action suggests that this feature is disclosed by Slinger at Col. 7 lines 66-67 and col. 8 lines 1-9. Applicants respectfully disagree. The cited paragraph discusses how an older version of software is displayed in a history window; characters from a new file are added to the window to supplement the compression dictionary as they are processed. Slinger does not determine a plurality of versions of a software component. To the extent that Slinger refers to an older version and a new version, they are referring to different releases of a software title. Release 2.04 and release 302 of a software title are not two versions of the same software, but rather two different software components with a similar title and function. Moreover, Slinger does not determine two versions of a software component, but rather uses a patch program to convert an older release to a new release.

Applicant respectfully contends that claim 9 is also allowable because in includes another

feature that is neither disclosed nor suggested by Slinger or any other reference cited, namely "means for comparing the lengths of the compressed versions". As clearly pointed out in the present application, a comparison of the lengths of compressed files of different versions of a software component can be used to provide a more accurate measure of true complexity of a software component by revealing characteristics that would otherwise be obscured. For example, dependencies between strings within a software component can be taken into account by comparing lengths of compressed raw and normalize versions of the software component. Slinger neither discloses not suggests comparing the lengths of compressed versions. The office action suggests that this feature is disclosed by Slinger at col. 3 lines 6-20. Applicants respectfully disagree. The cited passage discusses simultaneously matching an old release and a new release to generate a patch file and compressing the patch file. Thus, slinger is not comparing lengths of different compressed versions, but rather comparing code to identify differences to generate a patch to convert the old release to the new release,

Applicant respectfully contends that claim 9 is also allowable because in includes another feature that is neither disclosed nor suggested by Slinger or any other reference cited, namely "means for providing a software complexity metric comprising a comparison of the lengths of the compressed versions." Slinger neither discloses nor suggests providing a complexity metric. The office action suggests that this feature is disclosed by Slinger at col. 10 lines 10-17. Applicants respectfully disagree. The cited paragraph discusses comparing old and new releases, referred to as versions. This is done to generate a patch file. Thus, the comparison is of code itself, not lengths of compressed code. Moreover, the cited paragraph, and every other paragraph of Slinger fails to disclose or suggest a complexity metric. In sharp contrast, claim 9 claims a metric that compares lengths of different versions of a software component after compression of the versions. These comparisons can be used to accurately access features of the software component such as redundancy of the implementation of the software component and propagation of defects as stated in paragraph {017} of the specification.

Claims 10-11 include the features of claim 9 presented above and Applicant respectfully contends that they are allowable for the reasons presented above.

Applicant respectfully contends that claims 10 and 11 are also allowable because they include additional features that are neither disclosed nor suggested by Slinger or any other reference cited, namely that the comparing means finds a ratio using the length of the compressed version of the raw program text (C0) and the length of the compressed version of normalized program text (C1) and a ratio of the length of the compressed version of normalized program text (C1) and the length of the compressed version of normalized unique program text (C2), respectively. Slinger does not disclose or suggest the ratios C0/C1 or C1/C2 or any other ratio of lengths of different versions of a software component as a complexity metric.

Claims 12-19 are directed to a program storage device having a program of instructions to perform the functions of the apparatus of claim 12. Applicant respectfully contends that claims

12-19 are allowable for the reasons that claim 12 is allowable.

Applicant respectfully contends that claim 15 is also allowable because it includes an additional feature that is neither disclosed nor suggested by Slinger or any other reference cited, namely that the plurality of versions includes "unique normalized program text". As explained in the application this version of the software component is useful for creating a complexity metric because it is independent of the programming language and takes into account factors that affect complexity, such as code density and repetition. Slinger does not disclose or suggest unique normalized program text.

CONCLUSION

In view of the amendments and arguments presented herein, Applicant respectfully contends that claims 9-19 are in condition for allowance. Accordingly, Applicant respectfully requests entry of the amendments, reconsideration and allowance of claims 9-19 and issuance of letters patent.

Sincerely,

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